



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
 Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/368,846	08/05/99	LEIGHTON	K 6014-2-CON

021324
 OLDHAM & OLDHAM CO
 TWIN OAKS ESTATE
 1225 W MARKET STREET
 AKRON OH 44313

IM22/1206

EXAMINER

AFTERGUT, J

ART UNIT	PAPER NUMBER
1733	

DATE MAILED: 12/06/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No. 09/368,846	Applicant(s) LEIGHTON, KEITH R.	
	Examiner Jeff H. Aftergut	Art Unit 1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on ____.

2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-24 is/are pending in the application.

4a) Of the above claim(s) 18-22 is/are withdrawn from consideration.

5) ☐ Claim(s) ____ is/are allowed.

6) ☒ Claim(s) 1-17, 23 and 24 is/are rejected.

7) ☐ Claim(s) ____ is/are objected to.

8) ☐ Claims ____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on ____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☐ All b) ☐ Some c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. ____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)

16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.

18) ☒ Interview Summary (PTO-413) Paper No(s) 4.

19) ☐ Notice of Informal Patent Application (PTO-152)

20) ☐ Other.

Application/Control Number: 09/368,846

Page 2

Art Unit: 1733

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-19, and 22-24, drawn to a method of laminating a chip bearing card, classified in class 156, subclass 153.
- II. Claims 20 and 21, drawn to a laminated card, classified in class 235, subclass 488.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by a materially different process such as one where the recess was formed in the substrate by etching chemically rather than mechanically milling.

Additionally, the chip could be embedded in a piece of plastic with a preformed recess therein and have a piece of plastic laminated there over in order to form the laminated card.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper. This application contains claims directed to the following patentably distinct species of the claimed invention: the species where the recess was

OCS_C_045448

Application/Control Number: 09/368,846
Art Unit: 1733

Page 3

formed via a milling operation or the species where the recess was preformed and maintained with a spacer during the laminating operation.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, no claims are generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

5. During a telephone conversation with Mark Watkins on 11-30-00 a provisional election was made with traverse to prosecute the invention of Group I, the species of milling out the recess for the contacts, claims 1-17, 23, and 24. Affirmation of this election must be made by

OCS_C_045449

Application/Control Number: 09/368,846
 Art Unit: 1733

Page 4

applicant in replying to this Office action. Claims 18- 22 have been withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-17, 23 and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, line 12, the line ends with a ".", however the claim does not end here.

Applicant is advised that the claim should only have one period at the end of the claim. It is suggested that --,-- be changed to --,and;--.

Double Patenting

8. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

9. Claim 11 is rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 1 of prior U.S. Patent No. 6,036,099. This is a double patenting rejection. All of the limitation of dependent claim 11 are claimed in independent claim 1 of the prior application.

OCS_C_045450

Application/Control Number: 09/368,846
Art Unit: 1733

Page 5

10. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

11. Claims 1-17, 23, and 24 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-16 of U.S. Patent No. 6,036,099.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims presented herein are generic to the operation as recited in the earlier patent and therefore the subject matter of the same are covered by the earlier claimed patent, see *In re Goodman*, 29 USPQ2d 2010.

12. Claims 1-17, 23 and 24 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-17 of U.S. Patent No. 5,817,207 in view of Templeton, Jr. et al.

The claimed invention in U.S. '207 is essentially the same invention as recited herein, except that the claims failed to recite that one skilled in the art would have milled the assembly in order to form contacts with the electronic component disposed within the card. However, as envisioned by Templeton, Jr. et al such milling to make electrical contact in a card with an embedded electronic component therein was known. Templeton, et al suggested that one skilled in the art would have known that subsequent to lamination of a circuit component within a card

Application/Control Number: 09/368,846
 Art Unit: 1733

Page 6

one would have milled the same. More specifically, an inductive coil 201 was formed upon a plastic substrate 202 of PVC for example. Onto the substrate 202 one laminated a second substrate 203 which covered and encapsulated the coil 201. The reference taught that subsequent to the lamination operation one milled out the contact holes 203b through the substrate in locations where the contact pads 201a of the inductive coil are in order to facilitate electrical contact with the inductive coil which was embedded within the plastic sheets. See column 7, lines 6-17. Because it would have been desirable to make contact with an embedded coil in a smart card which was a contactless card as envisioned by Templeton, Jr. et al, it would have been obvious to one of ordinary skill in the art of manufacturing a smart card to incorporate a milling step after card formation in the operations of US Patent '207 in the formation of a contactless smart card.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 1, 4-10, and 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent 6-176214 in view of UK 2,279,610 and Templeton, Jr. et al optionally further taken with UK 2,225,283.

Japanese Patent '214 taught a process for forming a smart card which included the steps of laminating with heat and pressure an assembly which included an IC chip 11 and a thin coil 12

JP
214

OCS_C_045452

Application/Control Number: 09/368,846
Art Unit: 1733

Page 7

(an antennae). The IC chip 11 and antennae 12 were disposed unsupported between plastic films 14. On either side of plastic films 14 were additional plastic films 15. The assembly was disposed in a press and heat and pressure were applied in order to laminate the layers together to form the smart card. The reference to Japanese Patent '214 failed to teach that the heat and pressure laminating operation included a cooling operation while the press remained under pressure. Additionally, there is no mention of milling the laminated card in order to gain access to contacts of the chip and/or antennae for purposes of making physical contact with the same.

However, in the art of making a laminated smart card, it was known as evidenced by UK '610 that one skilled in the art when laminating the same together would not have applied high heat and pressure and then removed the same in the lamination operation for processing under such extreme conditions would lead to damage of the chip and/or antennae in the laminate. The reference to UK '610 suggested that one skilled in the art would have interposed a printed circuit 11 with reinforced elements 19 between two outer sheets 37 and 38 of thermoplastic in the PVC family with interposed polyester layers coated with thermally activated catalyst adhesive and the assembly was disposed between pressing plates. The assembly was heated and then pressure applied to the same in order to encapsulate the electrical components of the card. Subsequent to the application of this heat and pressure, the pressure was maintained while the card was allowed to cool in the press, see page 11, line 16-page 12, line 12. The reference made clear that in order to avoid damaging the integrated circuit which was being encapsulated that one would have heated the assembly, then applied heat and pressure to the assembly in the press and then cooled the assembly while pressure was maintained. Clearly, one viewing the same would have understood that heat and pressure as well as cooling under pressure would have been performed

OCS_C_045453

Application/Control Number: 09/368,846
Art Unit: 1733

Page 8

when laminating the card with the integrated circuit therein. Note that Japanese Patent '214 performed the lamination operation in a heated press. The combination fails to suggest that one would have milled out openings in the card after formation in order to provide open contacts in the card.

However, the reference to Templeton, et al suggested that one skilled in the art would have known that subsequent to lamination of a circuit component within a card one would have milled the same. More specifically, an inductive coil 201 was formed upon a plastic substrate 202 of PVC for example. Onto the substrate 202 one laminated a second substrate 203 which covered and encapsulated the coil 201. The reference taught that subsequent to the lamination operation one milled out the contact holes 203b through the substrate in locations where the contact pads 201a of the inductive coil are in order to facilitate electrical contact with the inductive coil which was embedded within the plastic sheets. See column 7, lines 6-17. Because it would have been desirable to make contact with an embedded coil in a smart card which was a contactless card as envisioned by Templeton, Jr. et al, it would have been obvious to one of ordinary skill in the art of manufacturing a smart card to incorporate a milling step after card formation in the operations of Japanese Patent 6-176214 wherein the pressing operation was performed in a heated press where the pressure was maintained during the cooling operation as suggested by UK 2,279,610.

With respect to claims 4-5, the references as set forth above suggested the use of PVC and/or polyester materials and one skilled in the art would have been determined the suitable thickness for the material through routine experimentation. Regarding claims 6-7 and 9-10, note that UK '610 suggested that one skilled in the art would have increased the pressure after

OCS_C_045454

Application/Control Number: 09/368,846
Art Unit: 1733

Page 9

increasing the temperature (ramped the same up). One skilled in the art would have optimized the specific pressure used in order to achieve a good bond without disrupting the ability of the circuit to operate properly. Regarding claim 15, note that Templeton taught one would have provided an electrical contact in the cavity formed by milling. Regarding claims 16 and 17, one skilled in the art would have understood what kind of chips would have been useful for the manufacture of the cards. Regarding claims 8 and 14, the references as set forth above suggested the use of multiple films over the chip, for example Japanese Patent '214 suggested the use of multiple films 14 and 15 over the assembly. The specific pressures and temperatures employed in the operation would have been determined through routine experimentation.

While it is believed that the reference to UK '610 suggested that one would have ramped up the pressure during the laminating operation, to further evidence that the highest amount of pressure would have been applied when the assembly was cooled, the reference to UK '283 is cited. UK '283 is manufacturing an integrated circuit card where the assembled layers (which included thin plastic layers which had printing on the layers as well as in integrated circuit therein) were laminated together in a press. The reference taught that the press would have been preheated, the pressure applied and then the assembly removed or the assembly would have been preheated and the pressure applied in steps with the highest pressure applied while the assembly was being cooled in the press, see page 11, lines 3-13. It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a pressing operation in the manufacture of an integrated circuit card wherein the pressure applied would have been the highest when the card was being cooled in the press as suggested by UK 2,225,283 wherein the laminated card was formed by laminating with heat and pressure in a press as suggested by

OCS_C_045455

Application/Control Number: 09/368,846
Art Unit: 1733

Page 10

Japanese Patent 6-176214 and UK 2,279,610 wherein after lamination the card would have been milled in order to expose the contact pads of the electronic component within the card as suggested by Templeton, Jr. et al.

For a discussion of the dependent claims, see above.

15. Claims 2, 3, 11-13, 23, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as set forth above in paragraph 14 further taken with UK 2,294,899.

The references as set forth above in paragraph 14 suggested the overall operation, they failed to suggest that one would have provided the platens with a matte surface thereon such that the finished exterior surfaces of the card had a matte finish. Additionally, the references failed to mention a printing operation used in manufacturing the card (it should be noted that UK '283 suggested that layers 2 and 6 would have been provided with printing thereon, see page 5, lines 3-5 of the UK document). However, in the art of manufacturing a smart card where an integrated circuit was disposed within the card, it was known at the time the invention was made to provide the exterior of the card with a matte finish where the same was provided by employed pressing plates which had a matte finish thereon in order to reduce the spectral reflection as suggested by UK '899, see page 4, lines 4-6. Additionally, in manufacturing such smart cards, it was well known at the time the invention was made to provide printed information upon the same where the printed information would have been provided upon the layers prior to the pressing operation as in printed information 8 and additional information would have been printed upon the cards exterior after formation as in image 10. It would have been within the purview of the ordinary artisan to select suitable printing techniques from those which were readily available to the artisan and the specified printing techniques claimed are taken as conventional in the art of

Application/Control Number: 09/368,846

Page 11

Art Unit: 1733

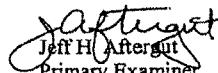
making smart cards. It would have been obvious to one of ordinary skill in the art of laminating to form a smart card to provide the card with a matte finish (in order to reduce reflection) as well as to provide the card with printing thereon in order to facilitate a useful card as suggested by UK 2,294,899 in the manufacture of a smart card as set forth above in paragraph 14.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff H. Aftergut whose telephone number is 703-308-2069. The examiner can normally be reached on Monday-Friday 6:30-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael W. Ball can be reached on 703-308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3599 for regular communications and 703-305-7718 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


Jeff H. Aftergut
Primary Examiner
Art Unit 1733

JHA
December 1, 2000

OCS_C_045457

Notice of References Cited				Application/Control No. 09/368,846		Applicant(s)/Patent Under Reexamination LEIGHTON, KEITH R.	
				Examiner Jeff H. Aftergut		Art Unit 1733	
Page 1 of 1							
U.S. PATENT DOCUMENTS							
*		DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	DOCUMENT SOURCE **
							APS OTHER
<input type="checkbox"/>	A	5,817,207	Oct. 1998	Leighton	156	298	<input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/>	B	6,036,099	Mar. 2000	Leighton	235	488	<input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/>	C	5,518,201	May. 1998	Templeton, Jr. et al	235	492	<input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/>	D						<input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/>	E						<input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/>	F						<input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/>	G						<input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/>	H						<input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/>	I						<input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/>	J						<input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/>	K						<input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/>	L						<input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/>	M						<input type="checkbox"/> <input type="checkbox"/>
FOREIGN PATENT DOCUMENTS							
*		DOCUMENT NO.	DATE	COUNTRY	NAME	CLASS	SUBCLASS
<input type="checkbox"/>	N	2,279,610	Jan. 1995	UK	GEC Avery Ltd.	-	-
<input type="checkbox"/>	O	6-176214	Jun. 1994	Japan	-	-	-
<input type="checkbox"/>	P	2,225,283	May. 1990	UK	-	-	-
<input type="checkbox"/>	Q	2,294,899	May. 1996	UK	-	-	-
<input type="checkbox"/>	R						
<input type="checkbox"/>	S						
<input type="checkbox"/>	T						
NON-PATENT DOCUMENTS							
*		DOCUMENT (Including Author, Title Date, Source, and Pertinent Pages)					DOCUMENT SOURCE **
							APS OTHER
<input type="checkbox"/>	U						<input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/>	V						<input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/>	W						<input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/>	X						<input type="checkbox"/> <input type="checkbox"/>

*A copy of this reference is not being furnished with this Office action. (See Manual of Patent Examining Procedure, Section 707.05(a).)

**APS encompasses any electronic search i.e. text, image, and Commercial Databases.
U.S. Patent and Trademark Office
PTO-892 (Rev. 03-98)

Notice of References Cited

Part of Paper No. 5

OCS_C_045458